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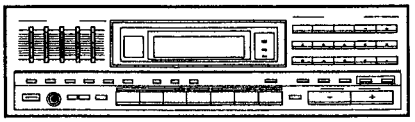
The future of sound and vision.

Service Manual



ORDER NO.
ARP1307

AUDIO/VIDEO STEREO RECEIVER

VSX-3000

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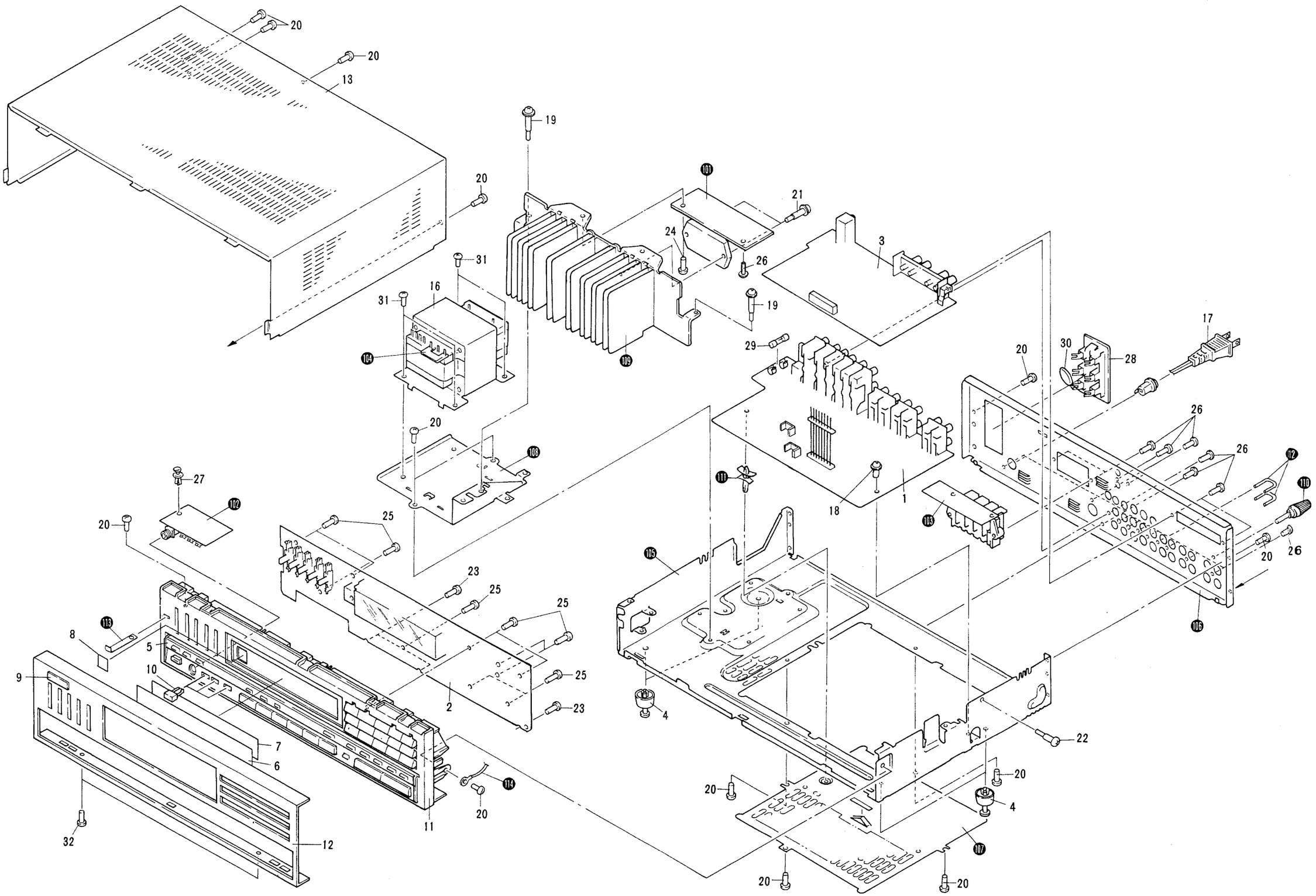
1. EXPLODED VIEW

NOTES:

- *Parts without part number cannot be supplied.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *For your Parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.*
  ★★ GENERALLY MOVES FASTER THAN ★
  This classification should be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- *Parts marked by " ⊙ " are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

Parts List

Mark	No.	Part No.	Description
	1	AWZ1276	Small signal, Video assembly
	2	AWZ1277	Control assembly
	3	AWZ1281	Tuner assembly
	4	AEC-784	Leg assembly
	5	AAH1019	Alminum sash
	6	AAK1173	PVC panel
	7	AAK1174	FL filter
	8	AAK1175	IR filter
	9	AAM-030	Friction plate
	10	AAY-306	Push knob A (Speaker)
	11	AMB1123	Front panel base
	12	ANB1071	Alminum panel
	13	ANE1024	Bonnet
	14		.....
	15		.....
⚠ ★	16	ATS1055	Power transformer (AC120V, T1)
⚠	17	ADG-089	AC power cord
	18	ABA-252	Screw
	19	ABA-297	Screw
	20	ABA1009	Screw
	21	ABA1022	Screw
	22	ABA-176	Screw
	23	ATZ26P120FZK	Screw
	24	BBT30P080FMC	Screw
	25	BBZ26P080FMC	Screw
	26	BBZ30P080FZK	Screw
	27	AMR1066	Plastic rivet
⚠	28	AKP-515 (AKP-504)	AC Socket (AC OUTLET)
⚠ ★★	29	AEK-100	Fuse (4A,FU1)
⚠	30	ACG-502	Capacitor (0.01μF/AC400V,C1)
	31	ABA-298	Screw
	32	BPZ30P080FZK	Screw
	101		Power Amp assembly
	102		SP Switch assembly
	103		SP Terminal assembly
	104		Terminal assembly
	105		Chassis
	106		Rear panel
	107		Bottom plate
	108		Transformer frame
	109		Heat sink
	110		GND terminal
	111		PCB holder
	112		Pin jack jumper plug
	113		Ground plate
	114		Ground wire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2. ELECTRICAL PARTS LIST

NOTES:

- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*
  Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560Ω	*56 × 10¹*	*561 .....*	*RD¼PS 5 6 1 J*
47kΩ	*47 × 10³*	*473 .....*	*RD¼PS 4 7 3 J*
0.5Ω	*0R5 .....*		*RN2H 0 R 5 K*
1Ω	*010 .....*		*RS1P 0 1 0 K*

  Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ	*562 × 10¹*	*5621 ....*	*RN¼SR 5 6 2 1 F*

- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *For your Parts Stock Control, the fast moving items are indicated with the marks ★★ and ★ .*
  ★★ GENERALLY MOVES FASTER THAN ★
  This classification should be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- *Parts marked by " ⊙ " are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

Miscellaneous Parts

P.C.BOARD ASSEMBLIES

Mark	Symbol & Description	Part No.
⊙	Small signal, Video assembly	AWZ1276
⊙	Control assembly	AWZ1277
⊙	Tuner assembly	AWZ1281
	Power Amp assembly	Non supply
	SP Switch assembly	Non supply
	SP Terminal assembly	Non supply
	Terminal assembly	Non supply

OTHERS

Mark		Symbol & Description	Part No.
⚠	★	T1 Power transformer (AC 120V)	ATS1055
⚠		AC Socket (AC OUTLET)	AKP-515 (AKP-504)
⚠	★★	FU1 Fuse (4A)	AEK-100
⚠		AC power cord	ADG-089
		Remote control unit	AXD1015
⚠		C1 Capacitor (0.01μF/AC400V)	ACG-502

Small signal,Video assembly (AWZ1276)

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	IC102	CX-7977
★★	IC201—IC203	CX-894
★★	IC104	CXD1120P-1
★★	IC107	M5201P
★★	IC101	M5218P
★★	IC105, IC106	M5218PF
★★	IC301	NJM78M13A
★★	IC103	TC9162N
★★	IC204	μPC78L05
★★	IC302	μPC78M05H
★★	Q208	RN1203
★★	Q207	RN2201
★★	Q201, Q203, Q205	2SA933S (2SA1115)
★★	Q302	2SB560
★★	Q202, Q204, Q206, Q303—Q305	2SC1740S (2SC2603)
★★	Q101, Q102	2SC2878
★★	Q306—Q308	2SC1845
★★	Q301	2SD438
⚠ ★	D316	RBV602
★	D303, D308	RD13ESB3
★	D101	RD5.1ESB
★	D302, D306	RD6.2ESB
⚠ ★	D315	S1WB20
★	D201, D202, D307, D309, D311, D314, D111, D112	1SS131
★	D213, D312	11E2

RELAIES

Mark	Symbol & Description	Part No.
★★	RY302 Relay	ASR-112
★★	RY301 Relay	ASR1011 (ASR1009)

COIL

Mark	Symbol & Description	Part No.
	L201 Inductor	ATH-050

CAPACITORS

Mark	Symbol & Description	Part No.
⚠	C313 (0.01μF/AC400V)	ACG-502 (ACG1002)
⚠	C311, C312 (0.01μF/AC150V)	ACG1005
	C315 (22000μF/5.5V)	ACH1023
	C309, C310 (5600μF/50V)	ACH1031
	C113—C120, C125—C128	CCDSL221J50
	C131, C132	CCDSL390J50
	C137, C138, C156	CEAS010M50
	C147, C149, C150, C101, C102	CEAS100M25
	C155	CEAS100M50
	C123, C314, C153, C154	CEAS101M10
	C419, C420	CEAS100M63
	C121, C122, C207, C208, C301	CEAS101M16
	C304, C305, C307, C308, C204	CEAS222M10
	C205, C206	CEAS102M10
	C109, C110, C129, C130, C141, C142	CEAS2R2M50
	C302	CEAS222M25
	C205, C206	CEAS331M10
	C201—C203	CEAS470M16
	C303	CEAS471M25
	C107, C108	CEAS471M6
	C151, C157	CKDYF102Z50
	C306	CKDYX123M25
	C143, C144	CQMA153K50
	C133—C136	CQMA223K50
	C145, C146	CQMA823J50
	C103, C104	CQMA243J50
	C140	CQMA332K50
	C139	CQMA333J50
	C105, C106	CQMA823K50

RESISTORS

NOTE: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Mark	Symbol & Description	Part No.
	R317 (2.2M,1/2W)	ACN-209
	R307, R223	RD1/2PM□□□J
⚠	R304, R302, R308, R313	RD1/4PMF□□□J
	R206, R207	RD1/4PM121J
⚠	R310, R316	RS1LMF122J
⚠	R305	RS2LMF121J
	Other resistors	RD1/8PM□□□J

OTHERS

Mark	Symbol & Description	Part No.
	4P Terminal	AKB1007
	3P Terminal	AKB1021
	1P Termianl	AKB1022
	5P DIN Socket	AKP-081

Control assembly (AWZ1277)

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	IC504, IC505	BA3812L
★★	IC502	M74LS145P
★★	IC503	PDG002
★★	Q501, Q502	RN1201
★★	Q503, Q506	RN1203
★★	Q505	RN2201
★★	Q504	RN2203
★	D505, D506, D517	AEL1017
★	D501, D502, D509, D513	1SS131

SWITCHES

Mark	Symbol & Description	Part No.
★★	S501, S502, S504—S535, S537, S540—S545 Tact switch (VOL+, MUTE, VOL—, DISPLAY, TUNE+, 1-10/11-20, AM, TUNE-, FM, 5/15, 3/13, 2/12, 4/14, 1/11, 10/20, 8/18, 7/17, 9/19, 6/16, BAL-R, MONO, AUTO/MANU, BAL-L, MEMORY, NOISE FILTER, R SEL, ANT A/B, V SEL, POWER, VDP, TUNER, TAPE, PHONO, CD, VCR2, VCR1, SS, MOD ON/OFF, SET/NEXT, CLK ADJ, LOUDNESS)	ASG-711 (ASG-703)

COIL

Mark	Symbol & Description	Part No.
	L501 Inductor (1mH)	ATH-098

CAPASITORS

Mark	Symbol & Description	Part No.
	C505, C506	CCDCH330J50
	C518, C530	CCDSL101J50
	C509, C520	CEJAR22M50
	C527, C529, C534	CEJAR47M50
	C533	CEJA010M50
	C513	CEJA100M50
	C504	CEJA101M10
	C532	CEJA220M25
	C502	CEJA4R7M50
	C519, C531	CEJA470M16
	C514, C516	CKDYB122K50
	C511, C512	CKDYB391K50
	C524, C525	CKDYB392K50
	C507, C508	CKDYB682K50
	C510, C523	CKDYX123M25
	C503, C515, C517	CKDYX223M25
	C526, C528	CKDYX393M25
	C521, C522	CQMA683J50

RESISTORS

NOTE: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Mark	Symbol & Description	Part No.
	R505 Resistor array (100kx9)	RA9S104J
★	VR501—VR505 (30kx2)	ACX-152
	Other resistors	RD1/8PM□□□J

OTHERS

Mark	Symbol & Description	Part No.
	Remote control reciever	AXX1002
★	X501 Ceramic resonator (503kHz)	ASS1004
★	V501 Fluorenscent tube	AAV1013

Tuner assembly (AWZ1281)

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	IC702	AN7470P
★★	IC701	LA1265S
★★	IC703	LM7001
★★	Q702	RN1203
★★	Q701, Q703	RN2201
★★	Q709	2SC1740S (2SC2603)
★★	Q707, Q708	2SC1740SLN
★★	Q603, Q605	2SC2668
★★	Q602	2SC2786
★★	Q604	2SK161
★★	Q601	2SK241
★	D701—D708	1SS131
★	D651, D652	SVC321C2 (SVC321D2)
★	D601—D603	1SV147

RELAY

Mark	Symbol & Description	Part No.
★★	RY701	ASR-080

COILS, TRANSFORMERS, AND FILTERS

Mark	Symbol & Description	Part No.
	L651 AM OSC coil	ATB-100
	L601 FM coil	ATC1001
	L602 FM coil	ATC1002
	L603 FM coil	ATC1003
	L701 FM detector coil	ATE-079
	L604—L606 Inductor	LAU2R2M
	L652	LTA472J
	T651 AM antenna transformer	ATB-095
	T601 FM RF transformer	ATC-194
	T602 FM coupling transformer	ATE-063
	F601 FM ceramic filter (10.7MHz)	ATF-107
	F602 FM ceramic filter (10.7MHz)	ATF-119
	F701 AM ceramic filter (450kHz)	ATF-201
	F603 Bandpass filter (88-108MHz)	ATF1018

CAPACITORS

Mark	Symbol & Description	Part No.
	TC651, TC652 Trimmer	ACM-015
	C614, C616	CCDCH02OC50
	C612	CCDCH08OD50
	C610, C652, C747, C748	CCDCH15OJ50
	C611	CCDCH33OJ50
	C601, C604, C605	CCDRH33OJ50
	C602	CCDRH39OJ50
	C606	CCDSL02OC50
	C607	CCDSL05OC50
	C608	CCDSL101J50
	C613	CCDTH18OJ50
	C706	CCDSL221J50
	C714	CEANP01OM50
	C716, C745	CEASR22M50
	C744, C746	CEASR47M50
	C704	CEAS0R1M50
	C705	CEAS010M50
	C718	CEAS1R5M50
	C656, C708, C711	CEAS100M50
	C750—C752	CEAS101M16
	C707	CEAS2R2M50
	C709, C717	CEAS3R3M50
	C710, C721, C722	CEAS4R7M50
	C715	CEAS470M16
	C741	CKCYB102K50
	C712	CKCYB472K50
	C654, C701, C702, C726	CKCYX473M25
	C603, C609, C615, C617—C619, C651, C653, C742, C743	CKDYF103Z50
	C620, C703, C749, C753	CKDYF103Z50
	C723, C724	CQMA122J50
	C719, C720	CQMA152J50
	C713	CQMA682J50
	C655	CQSA431J50
	C725	CQSA471J50

RESISTORS

NOTE: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Mark	Symbol & Description	Part No.
	R754, R755	RD1/2PM103J
⚠	R729, R730, R748	RD1/4PMF100J
	R741	RD1/4PM225J
★	VR702 Semi-fixed (4.7k)	VRTB6VS472
	Other resistors	RD1/8PM□□□J

OTHERS

Mark	Symbol & Description	Part No.
★	X702 Crystal resonator (7.2MHz)	ASS1005
★	X701 Ceramic resonator (450kHz)	ATF-125
	Antenna terminal board	AKA1006
	2P mini jack	AKN1006

Power Amp assembly

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	IC401	STK4211
★★	Q401, Q402	2SA933S
★	D403	RD15ESB
★	D401, D402	1S2471

COILS

Mark	Symbol & Description	Part No.
	L401, L402 AF choke coil (53μH)	ATH1009

CAPACITORS

Mark	Symbol & Description	Part No.
	C407, C408	CCCSL030C50
	C405, C406	CCCSL101J50
	C403, C404	CCDSL221J50
	C411, C412	CEAS010M50
	C409, C410, C417	CEAS101M10
	C401, C402	CEAS2R2M50
	C413, C414	CEAS470M50
	C418	CKDYF103Z50
	C415, C416	CQMA104K50
	C421, C422	CCDSL050C50

RESISTORS

NOTE: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Mark	Symbol & Description	Part No.
	R415, R416 (0.1,5W)	ACN1015
	R409, R410	RD1/2PM472J
⚠	R414, R421—R424, R411, R412	RD1/4PMF□□□J
	R413	RD1/4PM472J
	Other resistors	RD1/8PM□□□J

SP Switch assembly

SWITCHES

Mark	Symbol & Description	Part No.
★★	S451 Push switch (SP A/B)	SUJ5LXXS
★★	S452 Push switch (SURROUND)	SUJLYS

RESISTORS

Mark	Symbol & Description	Part No.
	R453	RD1/8PM331J
⚠	R451, R452	RS1PMF331J

OTHERS

Mark	Symbol & Description	Part No.
	Headphone jack (PHONES)	AKN1002

SP Terminal assembly

SWITCH

Mark	Symbol & Description	Part No.
★★	S453 Slide switch (Surround level)	ASH1003

RESISTORS

Mark	Symbol & Description	Part No.
	R457	RS2LMF100J
	R454—R456	RS2LMF4R7J

OTHERS

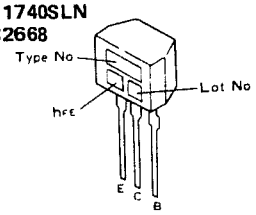
Mark	Symbol & Description	Part No.
	8P speaker terminal (SPEAKERS)	AKE-111

Terminal assembly

No supply part inside.

External Appearance of Transistor and ICs

2SA933S
2SC1740S
2SC1740SLN
2SC2668



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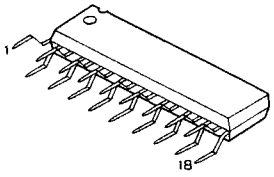

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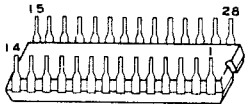

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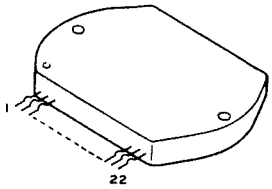

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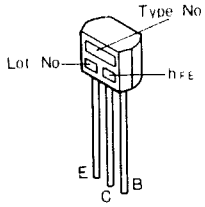

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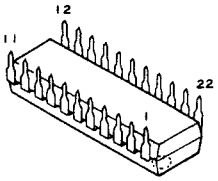

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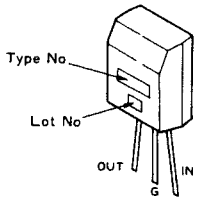

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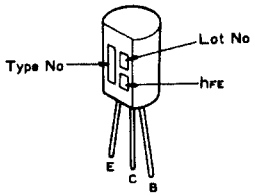

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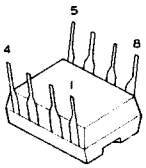

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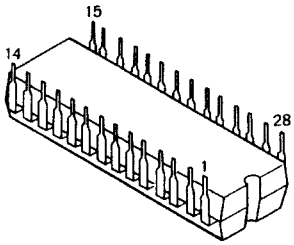

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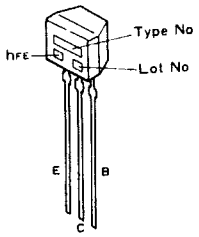

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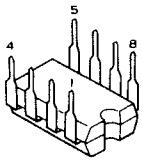
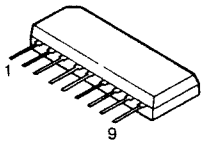
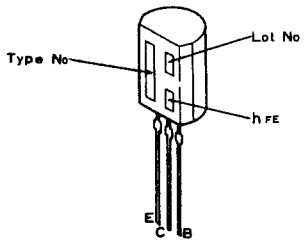


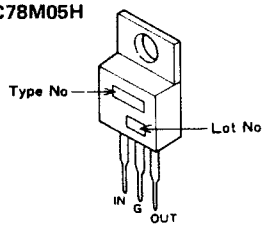
CX-894



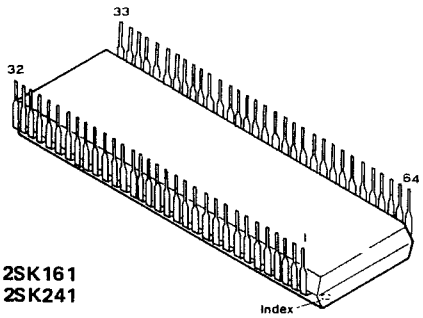
2SD438



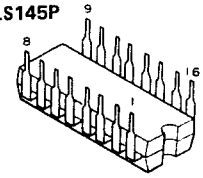
NJM78M13A
μPC78M05H



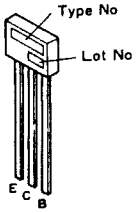
PDG002



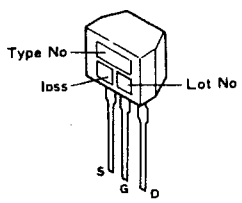
AN7470P
CXD1120P-1
LM7001
M74LS145P



RN1201
RN1203
RN2201
RN2203



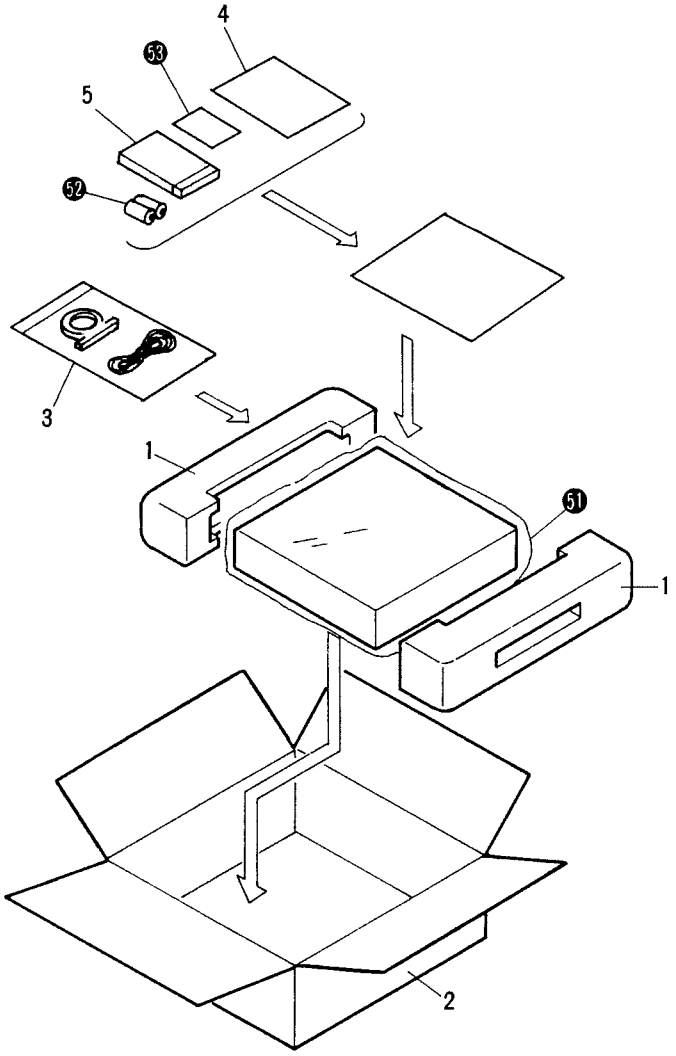
2SK161
2SK241



3. PACKING

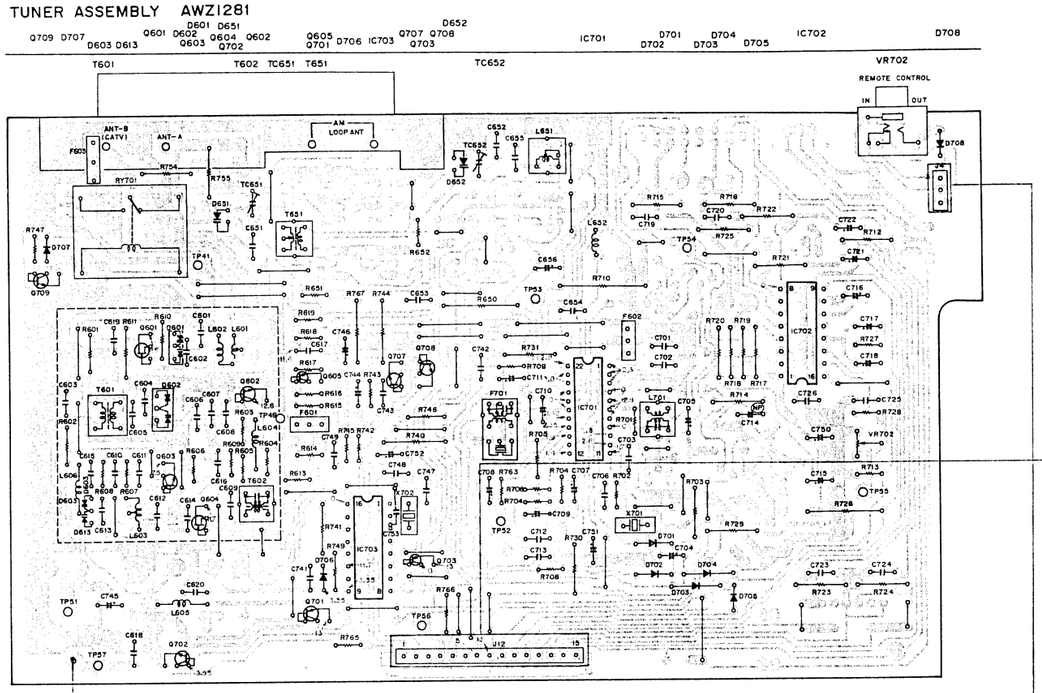
Parts List

Mark	No.	Part No.	Description
	1	AHA1015	Front / Rear pad
	2	AHD1161	Packing case
	3	AEA1006	Antenna set
	4	ARB1045	Operating instructions (ENGLISH)
	5	AXD1015	Remote control unit
	51		Packing sheet
	52		Battery assembly
	53		Waranty card

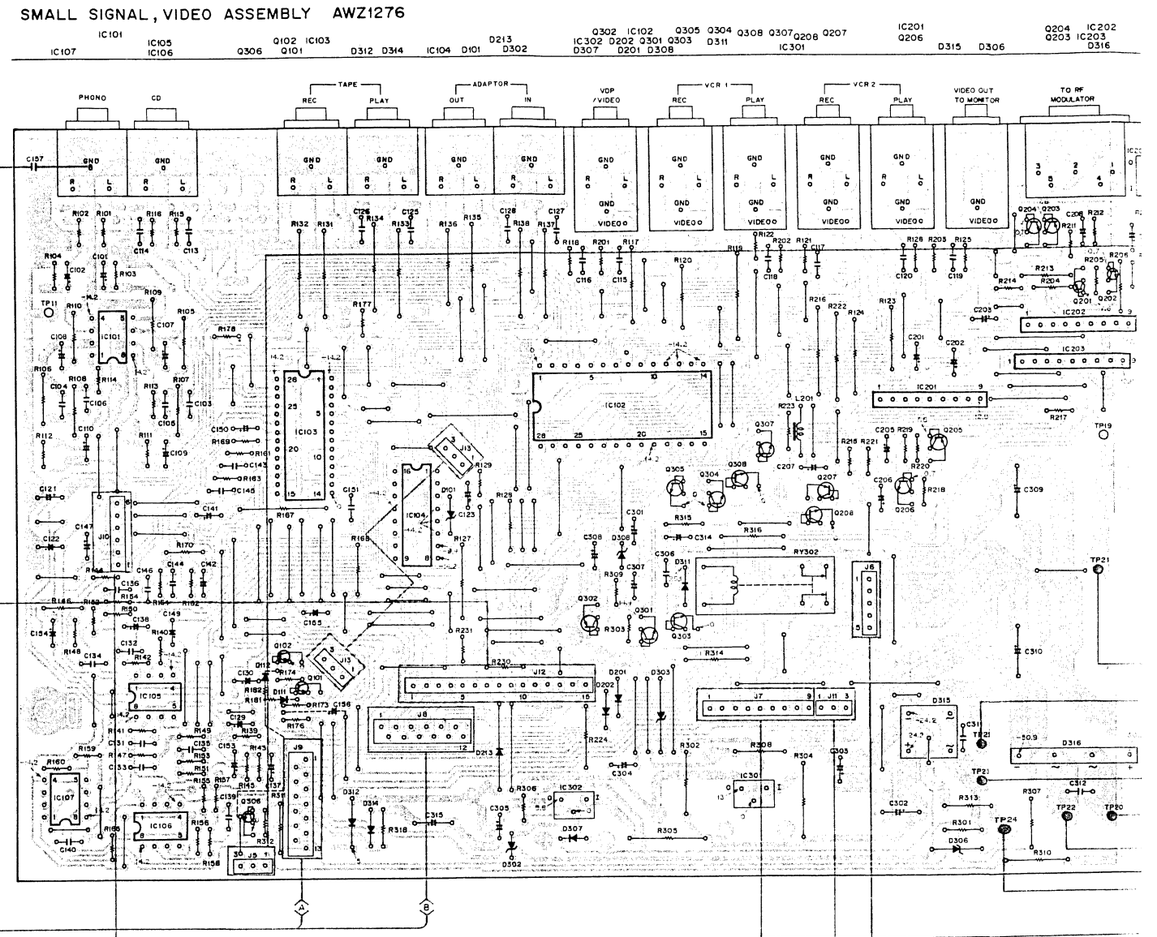


4. P.C.BOARDS CONNECTION DIAGRAM

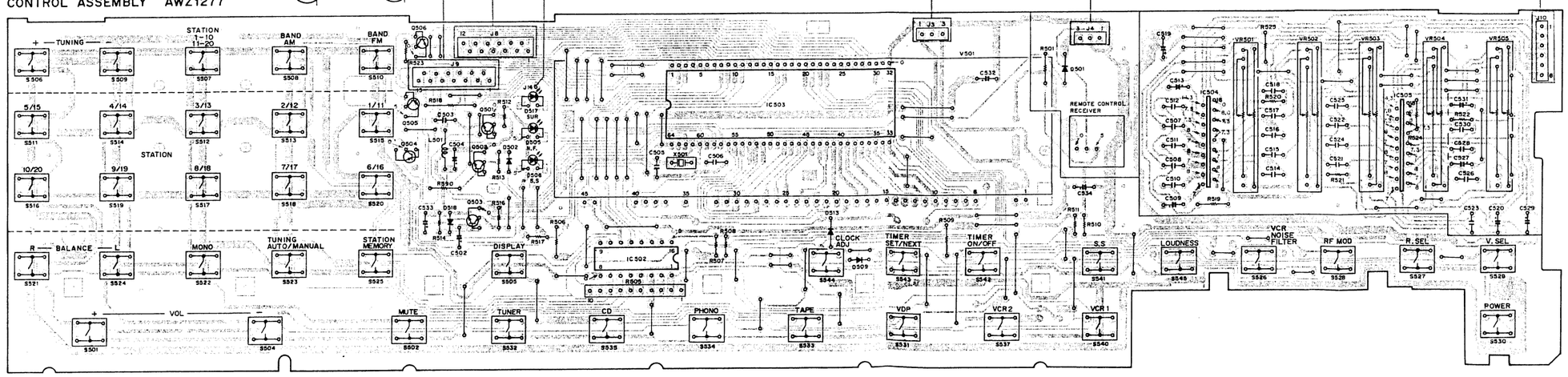
TUNER ASSEMBLY AWZ1281



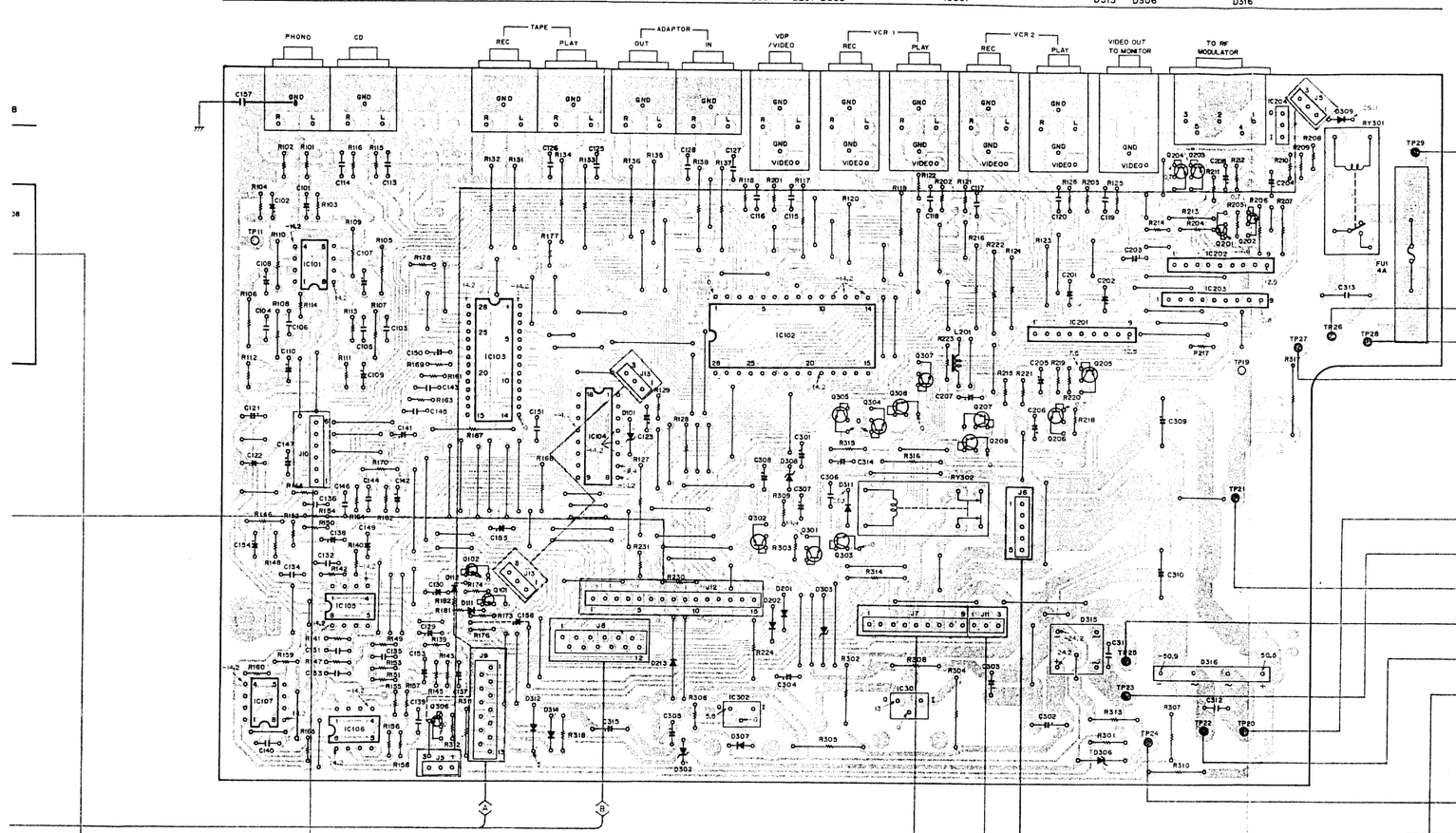
SMALL SIGNAL, VIDEO ASSEMBLY AWZ1276



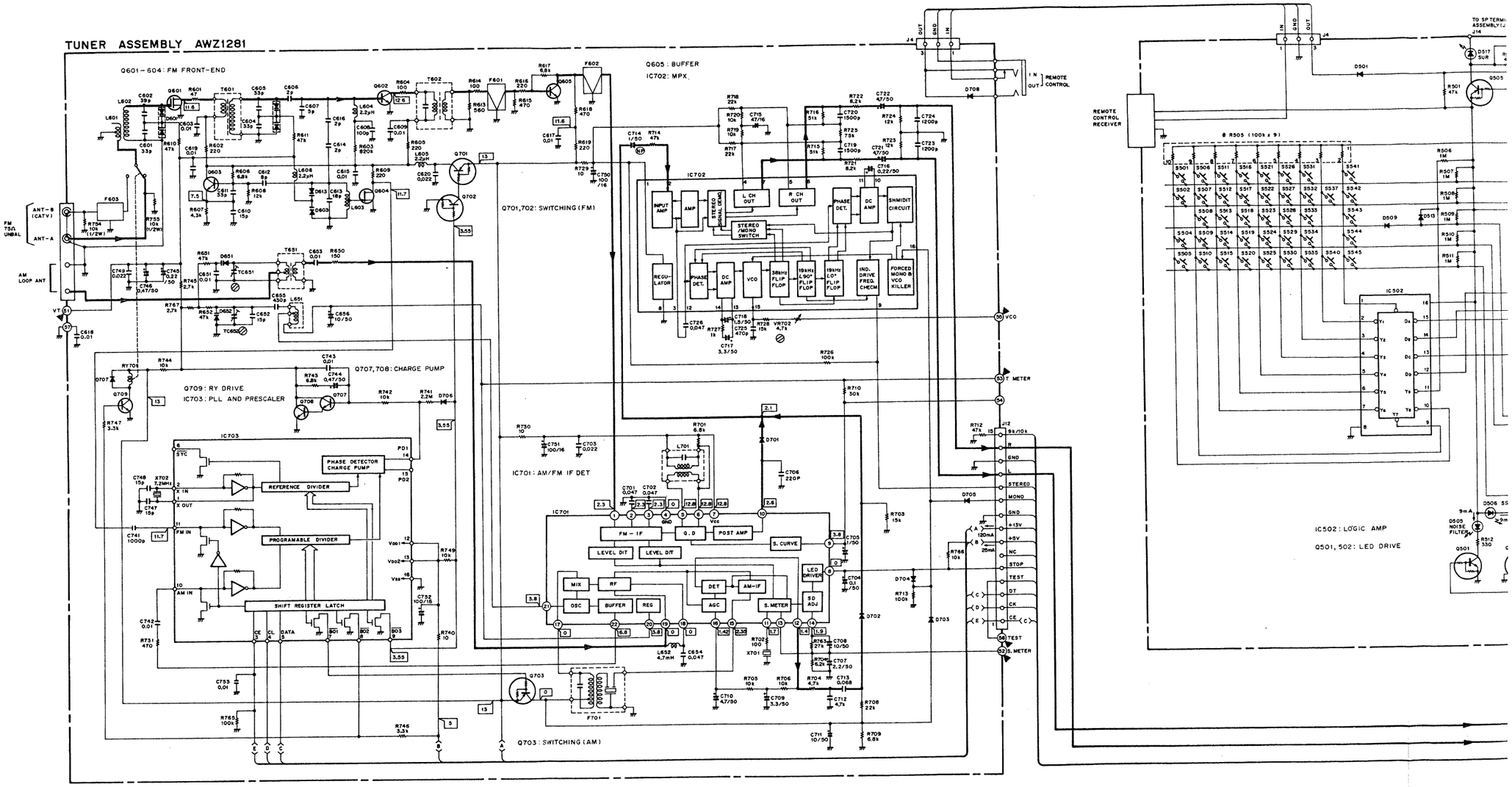
CONTROL ASSEMBLY AWZ1277



SMALL SIGNAL, VIDEO ASSEMBLY AWZ1276



5. SCHEMATIC DIAGRAM



Tuner assembly

IC702	AN7470P	F601	ATF-107
IC701	LA1265S	F602	ATF-119
IC703	LM7001	F701	ATF-201
Q702	RN1203	F603	ATF1018
Q701,Q703	RN2201	TC651,TC652	ACM-015
Q709	2SC1740S (2SC2603)	X702	ASS*1005
Q707,Q708	2SC1740SLN	X701	ATF-125
Q603,Q605	2SC2668		
Q602	2SC2786		
Q604	2SK161		
Q601	2SK241		
D701–D708	1SS131		
D651,D652	SVC321C2 (SVC321D2)		
D601–D603	1SV167		
RY701	ASR-080		
L651	ATB-100		
L601	ATC1001		
L602	ATC1002		
L603	ATC1003		
L701	ATE-079		
L604–L606	LAU282M		
L652	ATH1016		
T651	ATB-095		
T601	ATC-194		
T602	ATE-063		

Control assembly

IC504,IC505	BA3812L	S505,S506,D517	1SS131
IC502	M74LS145P	D501,D502,D509, D513	
IC503	PQG002	S501,S502,S504– S535,S537,S540– S545	ASG-711 (ASG-703)
Q501,Q502	RN1201	L501	ATH-098
Q503,Q506	RN1203	R505	RA9S104J
Q505	RN2201	VR501–VR505	ACX-152
Q504	RN2203		
		Remote control reciever	AXX1002
		X501	ASS1004
		V501	AAV1013

1. **RESISTORS:**
   Indicated in Ω, 1/4W, 1/6W and 1/8W, ±5% tolerance unless otherwise noted k: kΩ, M: MΩ, (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% tolerance
2. **CAPACITORS:**
   Indicated in capacity (μF)/voltage (V) unless otherwise noted p: pF. Indication without voltage is 50V except electrolytic capacitor.
3. **VOLTAGE, CURRENT:**
   [V]: Signal voltage at 80 W + 80 W, 8Ω output (1 kHz)
   (V): DC voltage (V) at no input signal Value in ( ) is DC voltage at rated power.
   ⇦ mA: DC current at no input signal
   [mV]: Signal voltage at FM 400 Hz ± 75 kHz DEV.
4. **OTHERS:**
   ➡ : Signal route.
   ⊘ : Adjusting point.
   The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
   ※ marked capacitors and resistors have parts numbers.
   The underlined indicates the switch position.

   This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

5. **SWITCHES**
   Underline indicates the switch position.

Control assembly

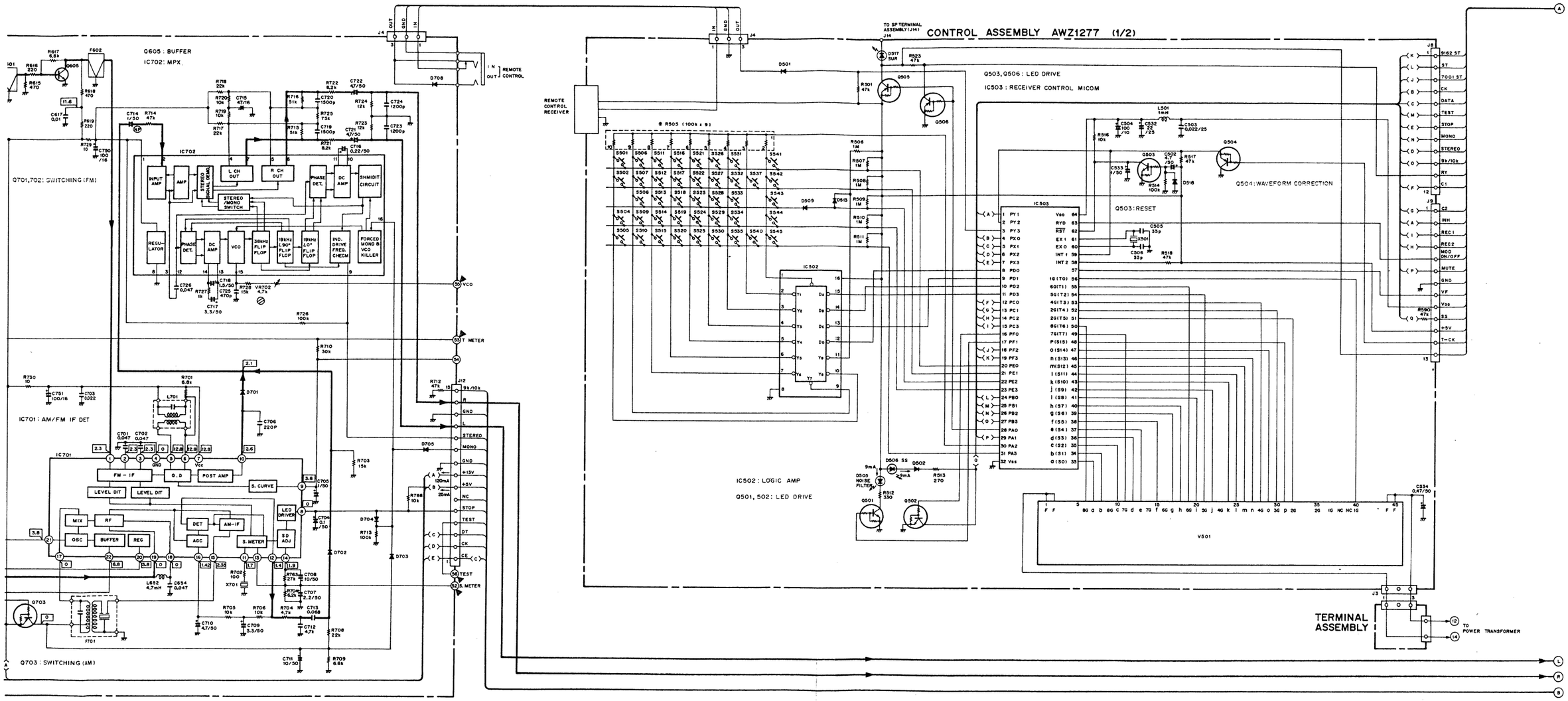
S501:	VOLUME+	S530:	POWER
S502:	MUTE	S531:	VDP
S504:	VOLUME–	S532:	TUNER
S505:	DISPLAY	S533:	TAPE
S506:	TUNING+	S534:	PHONO
S507:	STATION 1–10/11–20	S535:	CD
S508:	BAND AM	S537:	VCR2
S509:	TUNING–	S540:	VCR1
S510:	BAND FM (ANT-A/B)	S541:	SIMULATED STEREO
S511:	STATION CALL 5/15	S542:	TIMER ON/OFF
S512:	" 3/13	S543:	TIMER SET/NEXT
S513:	" 2/12	S544:	CLOCK ADJ
S514:	" 4/14	S545:	LOUDNESS
S515:	" 1/11		
S516:	" 10/20		
S517:	" 8/18		
S518:	" 7/17		
S519:	" 9/19		
S520:	" 6/16		
S521:	BALANCE-R		
S522:	MONO		
S523:	TUNING AUTO/MANUAL		
S524:	BALANCE-L		
S525:	STATION MEMORY		
S526:	VCR NOISE FILTER		
S527:	R SEL		
S528:	RF MOD ON/OFF (ANT/VIDEO)		
S529:	VIDEO SIGNAL SELECTOR		

SP switch assembly

S451:	SPEAKER A–B
S452:	SURROUND ON–OFF

SP terminal assembly

S453:	SURROUND LEVEL L–M–H



1. RESISTORS:
   Indicated in Ω, 1/4W, 1/6W and 1/8W, ±5% tolerance unless otherwise noted k: kΩ, M: MΩ. (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% tolerance
2. CAPACITORS:
   Indicated in capacity (μF)/voltage (V) unless otherwise noted p: pF. Indication without voltage is 50V except electrolytic capacitor.
3. VOLTAGE, CURRENT:
   V: Signal voltage at 80 W + 60 W, 8Ω output (1 kHz)
   : DC voltage (V) at no input signal Value in ( ) is DC voltage at rated power.
   mA: DC current at no input signal
   mV: Signal voltage at FM 400 Hz ± 75 kHz DEV.
4. OTHERS:
   : Signal route.
   : Adjusting point.
   The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
   ※ marked capacitors and resistors have parts numbers.
   The underlined indicates the switch position.

   This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

5. SWITCHES
   Underline indicates the switch position.

Control assembly

S501:	VOLUME+	S530:	POWER
S502:	MUTE	S531:	VDP
S504:	VOLUME−	S532:	TUNER
S505:	DISPLAY	S533:	TAPE
S506:	TUNING+	S534:	PHONO
S507:	STATION 1-10/11-20	S535:	CD
S508:	BAND AM	S537:	VCR2
S509:	TUNING−	S540:	VCR1
S510:	BAND FM (ANT-A/B)	S541:	SIMULATED STEREO
S511:	STATION CALL 5/15	S542:	TIMER ON/OFF
S512:	" 3/13	S543:	TIMER SET/NEXT
S513:	" 2/12	S544:	CLOCK ADJ
S514:	" 4/14	S545:	LOUDNESS
S515:	" 1/11		
S516:	" 10/20	SP switch assembly	
S517:	" 8/18	S451:	SPEAKER A-B
S518:	" 7/17	S452:	SURROUND ON-OFF
S519:	" 9/19		
S520:	" 6/16	SP terminal assembly	
S521:	BALANCE-R	S453:	SURROUND LEVEL L-M-H
S522:	MONO		
S523:	TUNING AUTO/MANUAL		
S524:	BALANCE-L		
S525:	STATION MEMORY		
S526:	VCR NOISE FILTER		
S527:	R SEL		
S528:	RF MOD ON/OFF (ANT/VIDEO)		
S529:	VIDEO SIGNAL SELECTOR		

10 11 12 13 14 15

SMALL SIGNAL, VIDEO ASSEMBLY AWZ1276

Q207,208: REGULATOR

IC204: REGULATOR

IC201-203: INPUT SWITCH

Q201,202: MONITOR BUFFER

Q203,204: VCR1 BUFFER

Q205,206: VCR2 BUFFER

AKP-081
TO RF MODULATOR

VIDEO OUT
TO MONITOR TV

Small signal, Video assembly

IC102	CX-7977	Q101,Q102	2SC2878
IC201-IC203	CX-894	Q306-Q308	2SC1845
IC104	CXD1120P	Q301	2SD438
IC107	M5203P	D316	RBV602
IC101	M5218P	D303,D308	RD13ES81
IC105,IC106	M5218PF	D101	RD5.1ES8
IC301	NJM78M13A	D111,D112	1SS131
IC103	TC9162N	D302,D306	RD6.2ES8
IC204	UPC78L05	D315	S1WB20
IC302	UPC78M05H	D201,D202,D307, D309,D311,D314	1SS131
Q208	RN1203	D213,D312	11E2
Q207	RN2201	RY302	ASR-112
Q201,Q203,Q205 Q302	2SA933S 2SB560	RY301	ASR1011 (ASR1009)
Q202,Q204,Q206, Q303-Q305	2SC1740S (2SC2603)	L201	ATH-050
		C313	ACC-502 (ACG1002)
		C311,C312	ACG1005
		C315	ACH1023
		C309,C310	ACH1031
		R317	ACN-209

CONTROL ASSEMBLY AWZ1277 (1/2)

IC504,505: GRAPHIC EQUALIZER AMP

IC101(1/2) IC101(2/2): EQUALIZER AMP

IC102: FUNCTION SW

IC103: LEVEL SHIFTER

IC104: FUNCTION SW

Q101: MUTING SW

Q102: MUTING SW

IC105: BUFFER AMP

IC106: S/S

IC107: S/S SW

VIDEO

AUDIO

L CH

R CH

VDP/VIDEO

VCR 1

VCR 2

PLAY

REC

TAPE

ADAPTOR

IN

OUT

LEVEL SHIFTER

LATCH CIRCUIT

SHIFT REGISTER

11 BIT SHIFT REGISTER

SWITCH MOS & POLY-SI REGISTER PATTERN

DATA LATCH

SWITCH DECODER

SWITCH DRIVER

STROBE DECODER

MODE/ CHANNEL SELECTOR

CHIP SELECTOR

L CHANNEL

R CHANNEL (SAME AS L CH)

BUFFER

BIAS

13 14 15 16 17

NOTE:
The indicated semiconductors are representative ones only. Other alternative semiconductors may be used and are listed in the parts list.

L, VIDEO ASSEMBLY AWZ1276

EGULATOR

.ATOR

AKP-081
TO RF MODULATOR

EO OUT
MONITOR TV

Small signal, Video assembly

IC102	CX-7977	Q101,Q102	2SC2878
IC201-IC203	CX-894	Q306-Q308	2SC1845
IC104	CXD1120P	Q301	2SD438
IC107	M5201P	D316	RBV602
IC101	M5218P	D303,D308	RD13ESB1
IC105,IC106	M5218PF	D101	RD5.1ESB
IC301	NJM78M13A	D111,D112	1SS131
IC103	TC9162N	D302,D306	RD6.2ESB
IC204	UPC78L05	D315	S1WB20
IC302	UPC78M05H	D201,D202,D307, D309,D311,D314	1SS131
Q208	RN1203	D213,D312	11E2
Q207	RN2201	RY302	ASR-112
Q201,Q203,Q205	2SA933S	RY301	ASR1011
Q302	2SB560		(ASR1009)
Q202,Q204,Q206,	2SC1740S	L201	ATH-050
Q303-Q305	(2SC2603)	C313	ACG-502
			(ACG1002)
		C311,C312	ACG1005
		C315	ACH1023
		C309,C310	ACH1031
		R317	ACN-209

CONTROL ASSEMBLY AWZ1277 (1/2)

IC504,505 : GRAPHIC EQUALIZER AMP

IC106 : S/S

IC103 : LEVEL SHIFTER

IC104 : FUNCTION SW

Q101 : MUTING SW

IC107 : S/S SW

Q102 : MUTING SW

IC105 : BUFFER AMP

Q301,302 : REGULATOR

IC301,302 : REGULATOR

Q303-308 : PROTECTOR

POWER AMP ASSEMBLY

IC401 : POWER AMP

Q401,402 : PROTECTOR

T1
POWER TRANSFORMER
ATS1055

TO TERMINAL BOARD

SWITCHED TOTAL 100W MAX.

UNSWITCHED 200W MAX.

AC120V 60Hz

AC POWER CORD ADG-089

AC OUTLET AKP-515(AKP-504)

SP SWITCH ASSEMBLY

SP TERMINAL ASSEMBLY

SP Terminal assembly
S453 ASH1003

SP Switch assembly
S451 SUJ5LXXS
S452 ASG1017-A

SPEAKER A

SPEAKER B

21.9V/8Ω

HEADPHONES
67mV/1W

TO CONTROL ASSEMBLY(J14)

Power Amp assembly

IC401	STK4211
Q401,Q402	2SA933S
D403,	RD15ESB
D401,D402	1S2471
L401,L402	ATH1009
R415,R416	ACN1015

A B C D

13 14 15 16 17 18

6. ADJUSTMENTS

FM Tuner Section

- Connect the FM signal generator (FM SG) to the FM ANTENNA 75Ω terminal through a 75Ω dummy antenna.
- Set the AUTO/MANUAL switch to the MANUAL position and the FUNCTION switch to the FM.

FM MONO ADJUSTMENT

Step	FM SG (1 kHz±75 kHz dev.)		Frequency display	Adjustment point	Adjustment procedure
	Frequency	Level			
1	No signal		87.5 MHz	—	Check pin VT (3.4±1.5V) of tuner assembly.
2			108.0 MHz		Check pin VT ($8.7^{+2.5V}_{-2.0V}$) of tuner assembly.
3	98 MHz	20~30 dB	98 MHz	T601,T602	Set the output from R763 of tuner assembly to maximum level.
4	98 MHz	60 dB	98 MHz	L701	Adjust voltage across pins 53 and 54 of tuner assembly to T meter center. (±50 mV)
5	Repeat step 3 until specification ratings are satisfied.				

FM MPX ADJUSTMENT

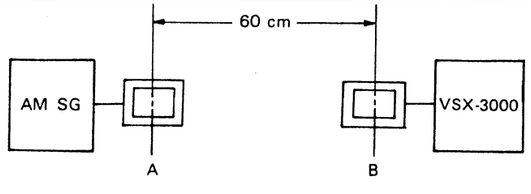
6	98 MHz	80 dB	98 MHz	VR702	Adjust the frequency at pin 55 of tuner assembly to 76.0 kHz (±100 Hz)
	No modulation				
7	98 MHz	60 dB	98 MHz	T602	Minimize distortion in both left and right channel outputs (adjust T602 to within ±90°)
	Stereo modulation*				
8	98 MHz	10 dB	98 MHz	—	Confirm that TUNER IND and STEREO IND are extinguished.
	Stereo modulation*				
* Stereo modulation: Main 1 kHz L+R ±68.25 kHz dev. Pilot 19 kHz ±6.75 kHz dev.					

AM (MW) Tuner Section

- Connect loop antenna to the AM signal generator (AM SG), and connect the Loop antenna (of the set) to AM ANTENNA terminal.
- Set the FUNCTION switch to the AM (MW) .

Step	AM SG (400Hz, 30% MOD)		Frequency display	Adjustment pint	Adjustment procedure
	Frequency	Level			
1	No signal		531 kHz	L651	Set pin VT of tuner assembly to 1.3V (±0.1V)
2			1602 kHz	TC652	Set pin VT tuner assembly to 10.0V (±0.5V)
3	Repeat steps 1 and 2 until both specification ratings are satisfied.				
4	603 kHz	40 dB	603 kHz	T651	Set the output from R763 of tuner assembly to maximum level.
5	1395 kHz	40 dB	1395 kHz	TC651	
6	Repeat steps 4 and 5 until both specification ratings are satisfied.				
7	999 kHz	55dB	999kHz	Confirm that TUNER IND becomes lit.	

- The distance between AM SG side loop antenna A and the receiver side (VSX-3000) loop antenna B, that is, from the center of A side loop antenna to that of B side loop antenna should be 60 cm.



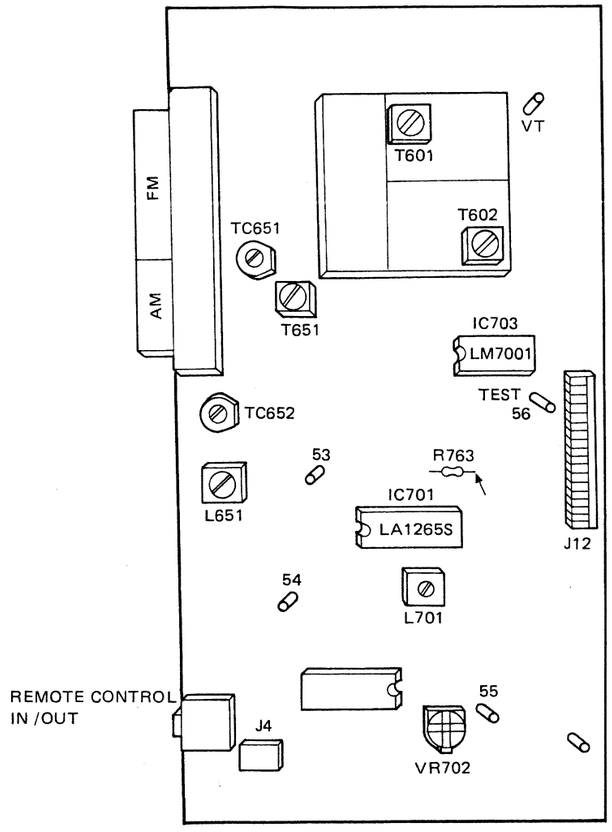


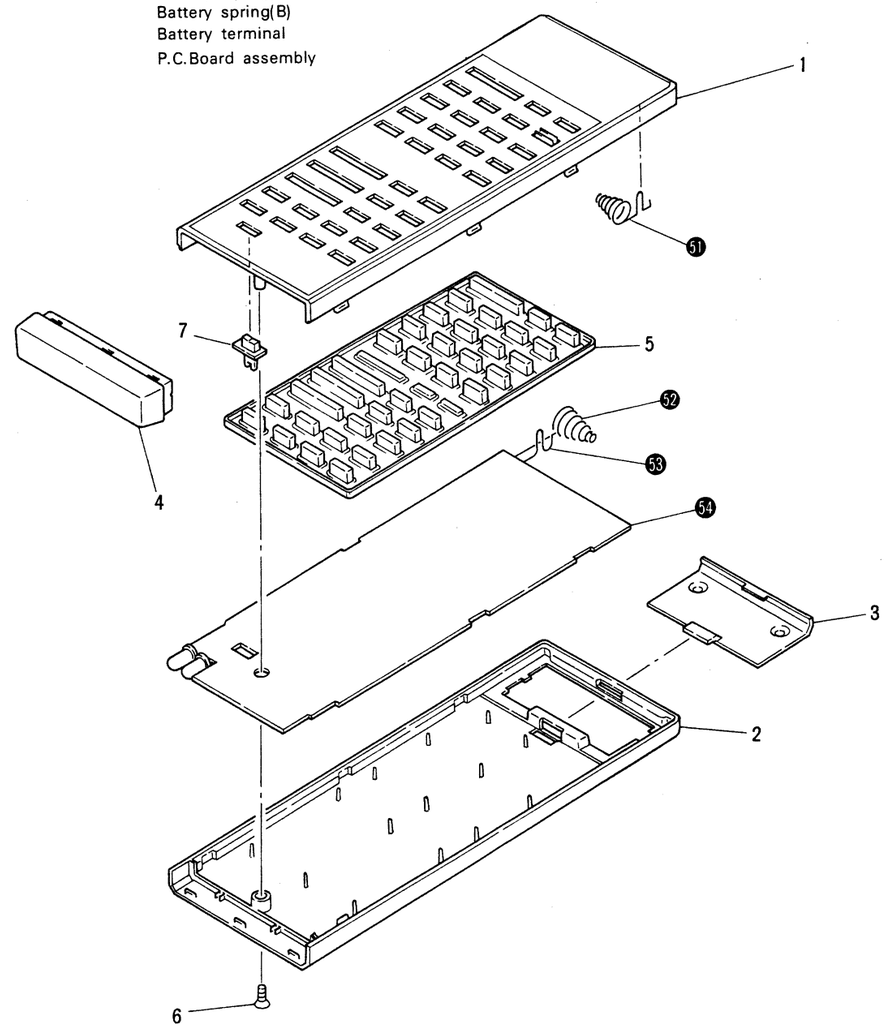
Fig.6-1 Adjustment Points

7. REMOTE CONTROL UNIT (AXD1015)

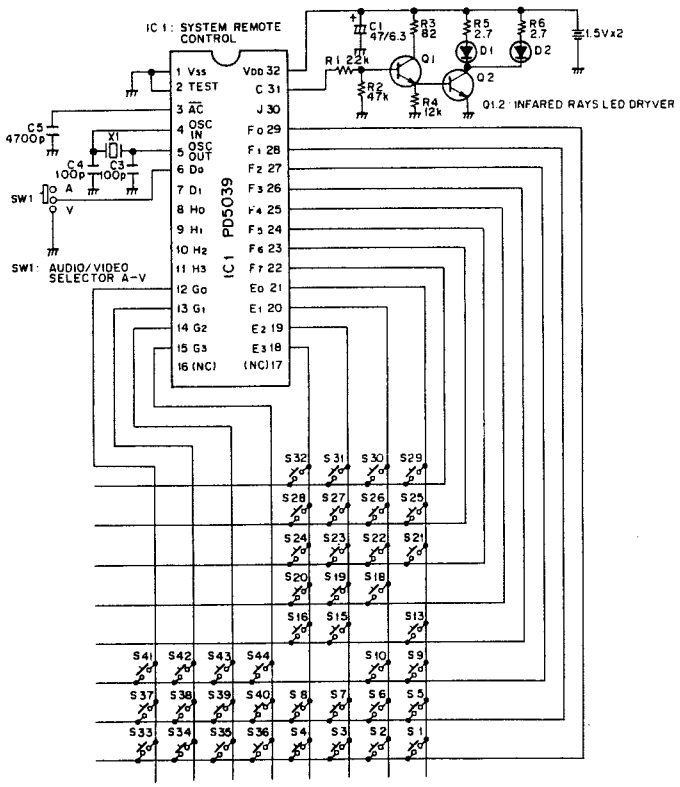
7.1 EXPLODED VIEW

Parts List

Mark	No.	Part No.	Description
	1	AZH1019	Case(A)
	2	AZH1016	Case(B)
	3	AZH1017	Case(C)
	4	AZH1200	Filter
	5	AZH1052	Rubber switch
	6	AZB1057	Screw
	7	AZS1021	Knob (A-V)
	51		Battery spring(A)
	52		Battery spring(B)
	53		Battery terminal
	54		P.C.Board assembly



7.2 P.C.BOARD PATTERN AND SCHEMATIC DIAGRAM



NOTE:
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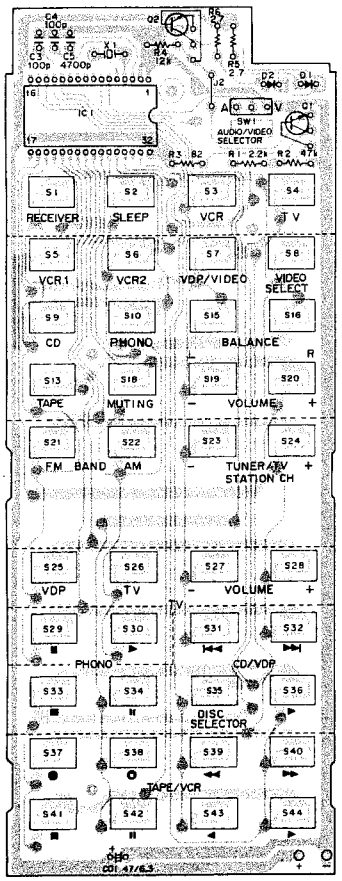
Remote Control Uint assembly	
IC1	PD5039
Q1	2SC2021
Q2	2SC2673
D1,D2	SE303A
SW1	SSSS21507
X1	CSB480EB

1. RESISTORS:
   Indicated in Ω, 1/4W, 1/6W and 1/8W, ±5% tolerance unless otherwise noted k; kΩ, M; MΩ, (F); ±1%, (G); ±2%, (K); ±10%, (M); ±20% tolerance
2. CAPACITORS:
   Indicated in capacity (μF)/voltage (V) unless otherwise noted p; pF. Indication without voltage is 50V except electrolytic capacitor.
3. OTHERS:
   ➡ : Signal route.
   ⊘ : Adjusting point.
   The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
   ※ marked capacitors and resistors have parts numbers.
   The underlined indicates the switch position.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.



4 SWITCHES :
S1 : RECEIVER
S2 : SLEEP
S3 : VCR
S4 : TV
S5 : VCR1
S6 : VCR2
S7 : VDP/VIDEO
S8 : VIDEO SELECT
S9 : CD
S10. PHONO

S13. TAPE
S15. BALANCE L
S16. BALANCE R
S18. MUTING
S19. VOLUME –
S20. VOLUME +
S21. BAND FM
S22. BAND AM
S23. TUNER/TV STATION CH –
S24. TUNER/TV STATION CH+

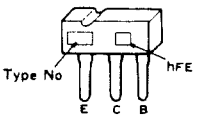
S25. VDP
S26. TV
S27. TV VOLUME –
S28. TV VOLUME +
S29. PHONO ■
S30. PHONO ▶
S31. CD/VDP ⏮
S32. CD/VDP ⏭
S33. CD/VDP ■
S34. CD/VDP ▮▮

S35. DISC SELECTOR
S36. CD/VDP ▶
S37. TAPE/VCR ●
S38. TAPE/VCR ○
S39. TAPE/VCR ◀◀
S40. TAPE/VCR ▶▶
S41. TAPE/VCR ■
S42. TAPE/VCR ▮▮
S43. TAPE/VCR ◀
S44. TAPE/VCR ▶

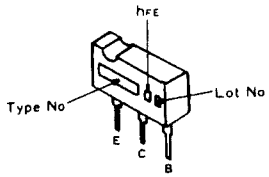
SW1. AUDIO/VIDEO SELECTOR A–V

External Appearance of Transistors and ICs

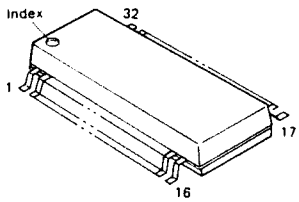
2SC2021



2SC2673



PD5039



7.3 ELECTRICAL PARTS LIST

NOTES:

- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*
  Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560Ω	*56 × 10¹*	*561*	*..... RD¼PS 5 6 1 J*
47kΩ	*47 × 10³*	*473*	*..... RD¼PS 4 7 3 J*
0.5Ω	*0R5*		*..... RN2H 0 R 5 K*
1Ω	*010*		*..... RS1P 0 1 0 K*

  Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ	*562 × 10¹*	*5621*	*.... RN¼SR 5 6 2 1 F*

- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *For your Parts Stock Control, the fast moving items are indicated with the marks ★★ and ★ .*
  ★★ GENERALLY MOVES FASTER THAN ★
  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- *Parts marked by " ⊙ " are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

P. C. Board assembly

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	IC1	PD5039
★★	Q1	2SC2021
★★	Q2	2SC2673
★	D1, D2 LED	SE303A

SWITCH

Mark	Symbol & Description	Part No.
★★	SW1 Slide switch (POWER)	SSSS21507

CAPACITORS

Mark	Symbol & Description	Part No.
	C1	CEAS470M6
	C3, C4	CCDSL101J50
	C5	CKCYB472K50

RESISTORS

NOTE: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Mark	Symbol & Description	Part No.
	R5, R6	RD1/4PM2R7J
	Other resistors	RD1/8PM□□□J

OTHER

Mark	Symbol & Description	Part No.
★	X1 Ceramic resonator	CSB480EB

8. SAFETY INFORMATION

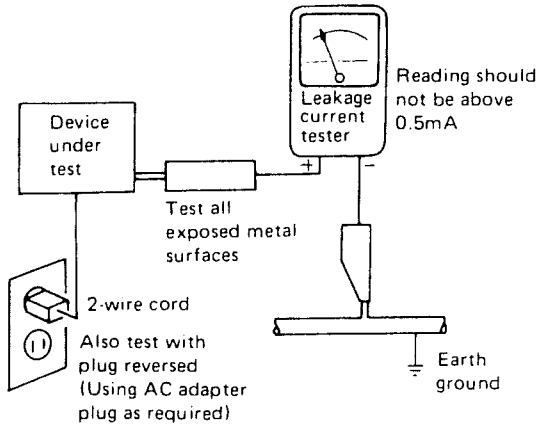
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, the PIONEER Service Manual may be obtained at a nominal charge from PIONEER.